



WASHINGTON STATE
AUTONOMOUS VEHICLE
WORK GROUP

Activity 1 Update

Francesca Maier
Activity 1 Group Lead

December 13, 2019

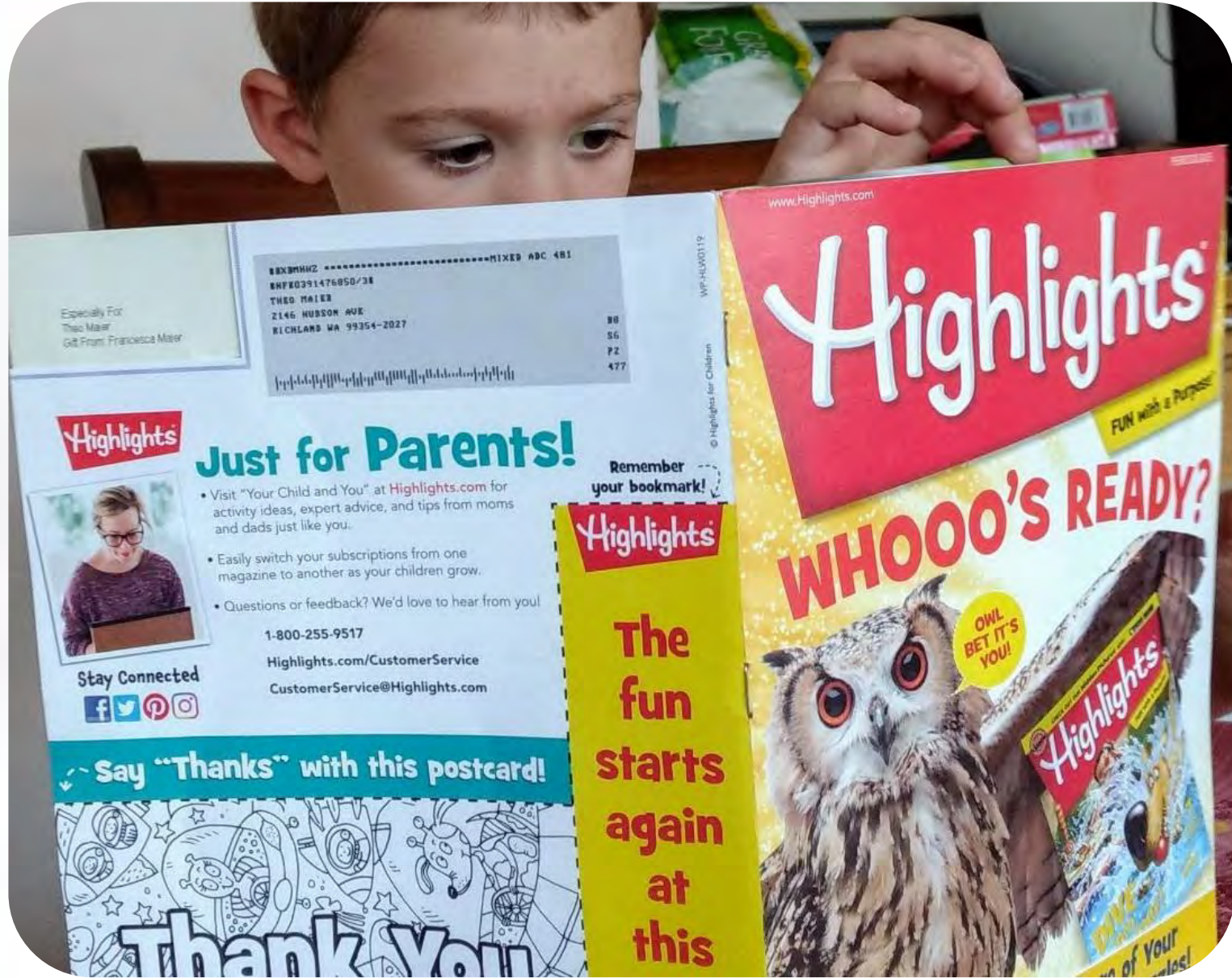
Infrastructure & Systems
Subcommittee Quarterly Meeting



Topics

- Recap Year 1 Outcomes
- Current Draft Policy Framework
- Year 2 Work Plan
- Discussion

Recap



Accomplishments in Year 1



16

Volunteers
(11 Active)



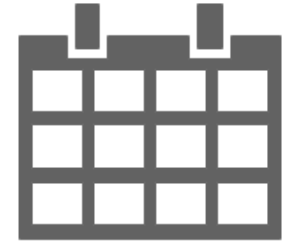
41

Documents
(25 Reviewed)



2,104

Pages
(1,013 Reviewed)



4

Months
(4 Down)



8 Policy Goal Statements Revised

Activity 1

Recommendations

- AV Work Group ExCo
- WSTC

- **#1 Adopt the policy goals** to enable the Infrastructure and Systems Subcommittee to continue the work on the CAT policy framework and, as a next step, develop specific strategies.
- **#2 Adopt the policy goals** and encourage the development of a state CAT/AV policy framework that would integrate these policy goals along with policy goals developed by other subcommittees.
- **Both recommendations were formally adopted**
 - » by the AV WG Executive Committee on September 26, 2019
 - » by the Washington State Transportation Commission on October 16, 2019

Objective



Washington State Department
of Transportation

Cooperative Automated Transportation (CAT) Draft Policy Framework

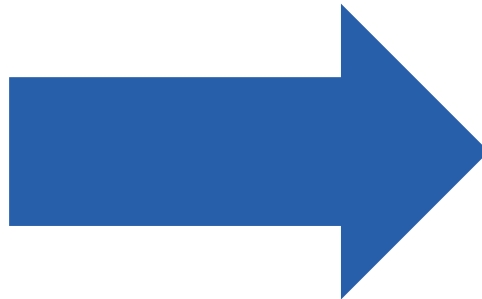
DRAFT

Working Document
November 26, 2018

For questions or
suggestions, please contact
WSDOT's CAT Working
Group Members or
WSDOT's CAT Program

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Infrastructure & Systems Subcommittee

Cooperative Automated Transportation (CAT) Draft Policy Framework

Working Document
December 13, 2019

Current Status



Infrastructure & Systems Subcommittee

Cooperative Automated Transportation (CAT) Draft Policy Framework

Working Document
December 13, 2019

- 8 new policy goal statements
- Revised introductory text
- Interim Strategies & Illustrative Actions

Active Volunteers



- Azmeena Hasham
- Cecile Malik
- Chris Grgich
- Dan McReynolds
- Francesca Maier
- Jeff Peterson
- Marc Daily
- Mariya Frost
- Robert Acevedo
- **Your Name Here**

Revised Draft Policy Framework Audiences



- Inform the Activity #2 efforts
- 2020 Legislative Session-Informational
- Local Partner Discussions
- Announcing and promoting the working group efforts
- The other six AV subcommittees that will receive the CAT Policy Goals

Revised Policy Framework Structure: What Changed?



- Introduction focuses on legislative mandate
- Defines CAT using AASHTO definition with expanded context
- Adds draft definitions for terms used in policy goal statements
- Adds section on the status of the document
- Replaces previous policy goal statements with the adopted statements
- Strategies & Illustrative Actions replaced with interim content
- Description of Methodology & Process is in an appendix

What did we do since the October Commission Meeting?



- Held a web meeting to discuss and agree on Activity 1 work plan for 2020
- Work Group members provided revised policy language and strategies and illustrative actions by **November 11th, 2019**
- Used input to develop draft document by **November 21st, 2019**
- Work Group members reviewed draft document with comments no later than **December 6th, 2019**
- Incorporated edits into current Draft CAT Policy Framework
- All input received is located on Drive [here](#)

Questions?



Year 2 Work Plan



WASHINGTON STATE
AUTONOMOUS VEHICLE
WORK GROUP



Washington State
Transportation Commission

Develop Strategies & Actions

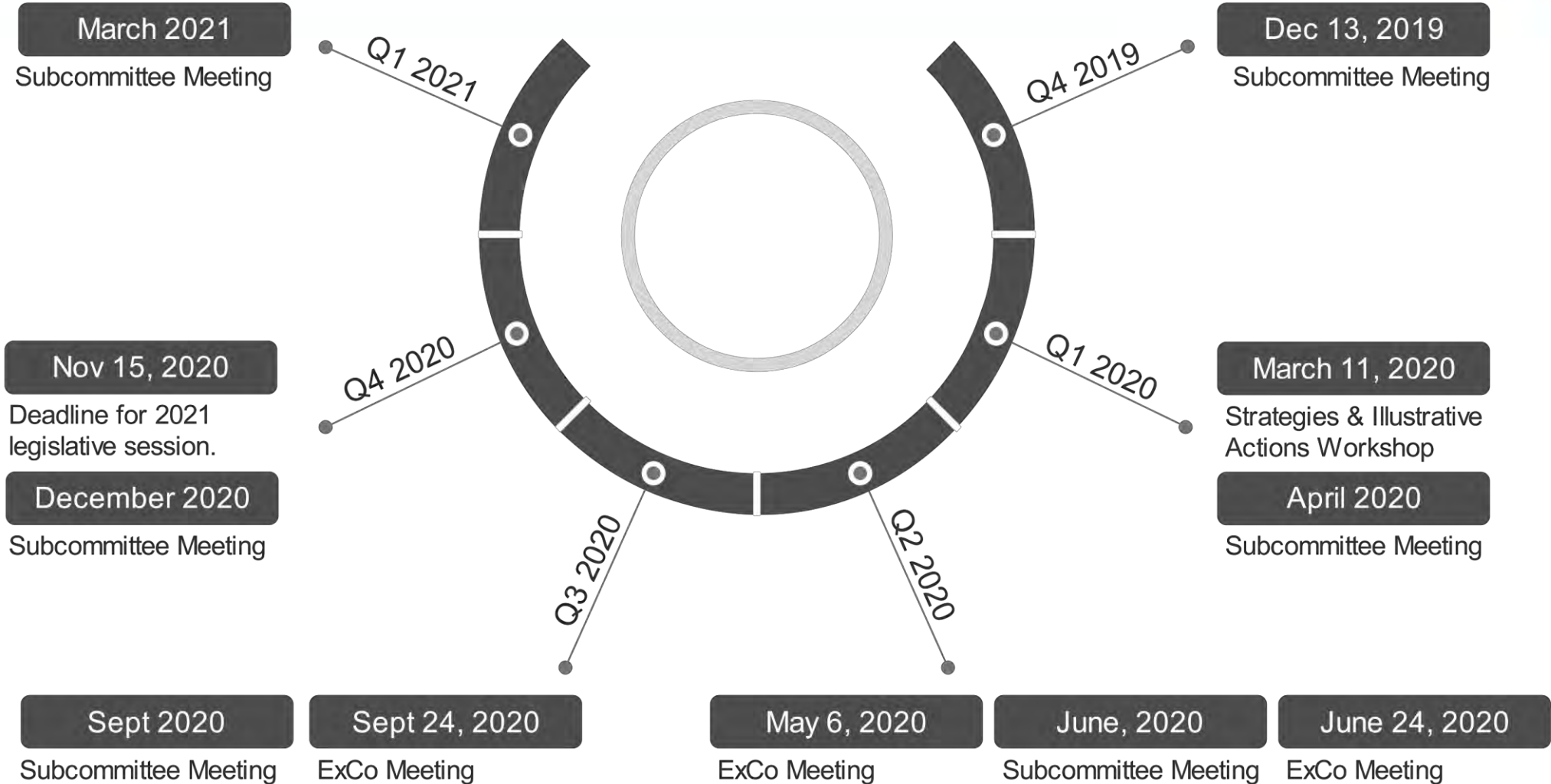
4. Infrastructure and Context Sensitive Street Design

Promote durable, physical and digital networks that accommodate the movement of people and goods in ways that are appropriate for the context.

Number	Potential Strategy	Example Actions	Legislative Goals Addressed*
01	Promote resilient infrastructure enhancements.	<ul style="list-style-type: none"> a. Pilot the use of recessed striping in areas with frequent snow plow activity. b. Develop standards for machine readable signing and striping. c. Prioritize roadway investments that support the evolving needs of the vehicle fleet over the service life of the facility. d. Partner with telecom companies to advance standards for communications infrastructure that support CAT, e.g. 5G. 	Preservation, Safety, Stewardship
02	Preserve the 5.9 GHz wireless communication spectrum for public safety applications.	<ul style="list-style-type: none"> a. Identify vehicle to everything (V2X) data sharing uses case implementations. b. Evaluate both cloud and roadside infrastructure-based V2X implementations in a technology neutral manner. c. Create synergy across jurisdictional boundaries for V2X applications (e.g. Real-time data sharing: traffic signal operations, winter operations, roadway weather, work zone operations, traveler information services, truck parking, commercial vehicle services and enforcement). 	Safety, Mobility, Stewardship

**Illustrative
Examples**

Proposed Timeline



2020 Tasks

- ✓ Receive and incorporate feedback on current draft policy framework
- ✓ Workshop to flesh out Strategies & Illustrative Actions
- ✓ Finalize Policy Framework for Adoption

Workshop Proposal: Vision



- Icebreaker
- Introduce objectives
- Group creates the rules of engagement
- Organize Illustrative Actions into Strategies
- Assign Strategies to Goals
- Buy-into plan to finalize document



Registration & Pre-work



Provide 3-5 Illustrative Actions through Google Form with registration

A screenshot of a Google Form titled "Women on A Roll Application". The form is displayed in a preview mode with a background image of people riding bicycles along a riverbank. The form interface includes a top navigation bar with a back arrow, the title "Women on A Roll Application", a star icon, and a "SEND" button. Below the navigation bar, there are tabs for "QUESTIONS" and "RESPONSES" (with a count of 11). The main content area shows "Section 1 of 7" and the title "Women on A Roll Application". The text of the form describes a grant-funded program for women instructors and lists requirements. At the bottom, there is a question titled "Preferred Name" with a "Short answer" dropdown menu and a text input field.

← Women on A Roll Application ★

SEND

QUESTIONS RESPONSES 11

Section 1 of 7

Women on A Roll Application

Wheelhouse Community Bike Shop received a grant from the Women Helping Women Fund Tri-Cities to implement a for-women-by-women education program called Women on A Roll. Wheelhouse is currently accepting applications for the first cohort of women instructors who will ultimately implement the program for the remainder of the year, hosting bike mechanics classes (using the Park Tool School curriculum), shop nights, and rides for women.

Previous bike mechanic or teaching experience are not prerequisite to be a Women on A Roll instructor! Wheelhouse is seeking a diverse group of women who are passionate about expanding the accessibility and autonomy of cycling and bike mechanics to currently under-served groups in the Tri-Cities. In addition to teaching Women on A Roll classes, we hope that our trainers will be active in their own communities being advocates for Smart Cycling and encouraging and supporting would-be cyclists and bike mechanics.

Preferred Name Short answer

Short answer text

Sources of Illustrative Strategies and Actions



- WSDOT draft policy framework and original mark-ups
- Output from 25 policy document reviews
- Mark-ups to current WA draft policy framework
- Pre-work from registration form
- Workshop brainstorming activity (March 2020)

Infrastructure and Context Sensitive Street Design

Implement multimodal level of service measures that ensure efficient person movement along with safer and more comfortable intersections. +0	Identify Infrastructure investments that enable CAT. +0
Design intersection traffic control devices to provide comfortable crossings for people walking and biking. +0	Develop guidelines to accommodate loading/unloading needs of shared automated fleet services at shared mobility hubs to ensure seamless connections to and from high quality transit. +0
Partner with the private sector and identify approaches for minimizing the need to expand the network of Vehicle-to-Infrastructure (V2I) enabled sensors (e.g., roadside units) installed, owned, operated and maintained. +0	Expand and target designated passenger loading zones to increase safe and efficient loading operations for shared automated vehicle fleet services. +0
Communicate with automobile manufacturers, local, regional and national partners to enhance the understanding of evolving maintenance and infrastructure needs for CAT strategies. +0	Provide guidance to improve traffic signal operations to accommodate automated vehicles, prioritizing high-occupancy vehicles, pedestrians, bicyclists, and transit vehicles. +0
Research, evaluate, adopt and implement smart technology that facilitates vehicle-to-vehicle and vehicle-to-infrastructure communication. +0	Expand the electric vehicle charging infrastructure and enabling grant programs. +0
Redirect transportation funding that has been traditionally used to expand system capacity to decrease travel demand by incentivizing TDM measures. +0	Develop sustainable financing models that consider long term maintenance and operation of the infrastructure that benefit the mixed fleet transition to connected and automated vehicles. +0
Create and update a roadway classification system to identify roadways ready for automated vehicles using the SAE Levels 0-5. +0	Work with MPOs and RTPOs to update assumptions related to shared and automated mobility used in travel forecasting. +0
Incorporate the use of Unmanned Aerial Systems (UAS) into transportation system maintenance operations. +0	Implement mode-neutral service levels. +0
Identify CAT investments that improve safety for active transportation users. +0	Encourage the safe and efficient loading and unloading of passengers for high-occupancy modes (e.g., car pools, SMaaS, transit). +0
Reallocate transportation funding to prioritize safe and efficient mobility. +0	Identify roadways ready for automated vehicles using the SAE Levels 2-5. +0
Plan and design our transportation infrastructure with consideration for all modes. While balancing the needs of automated passenger vehicles, our transportation system will remain safe and efficient. +0	

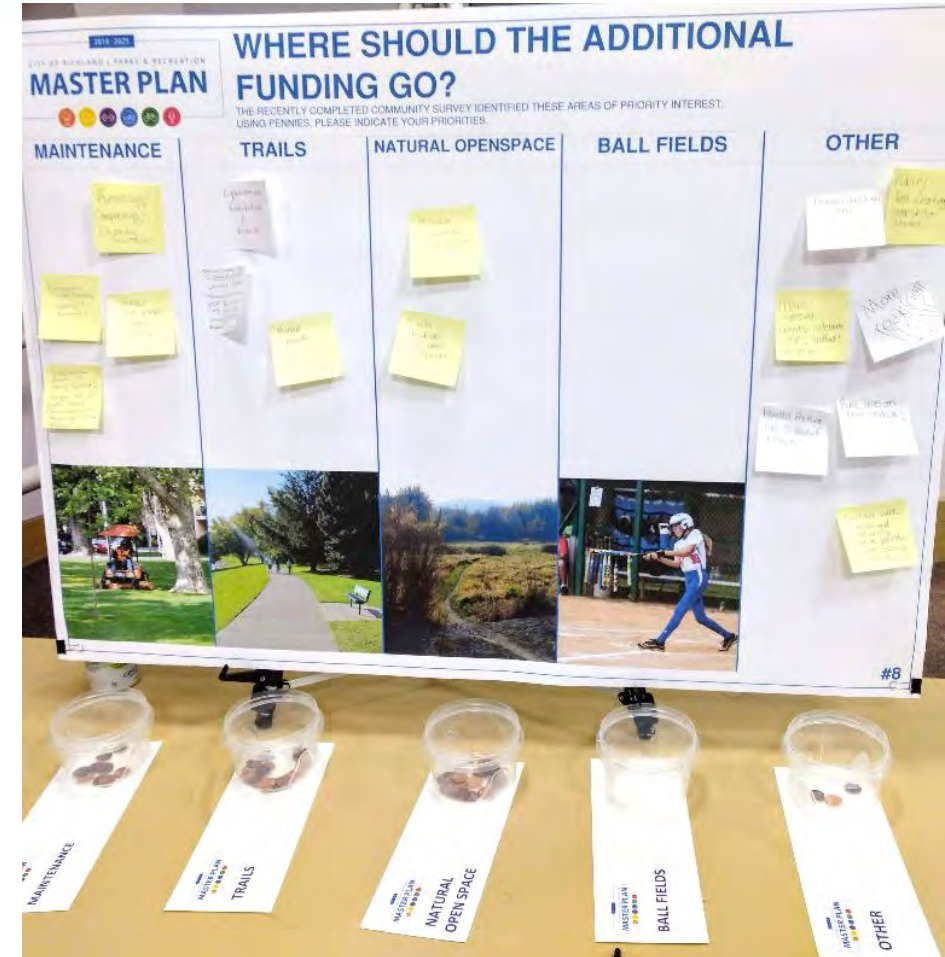
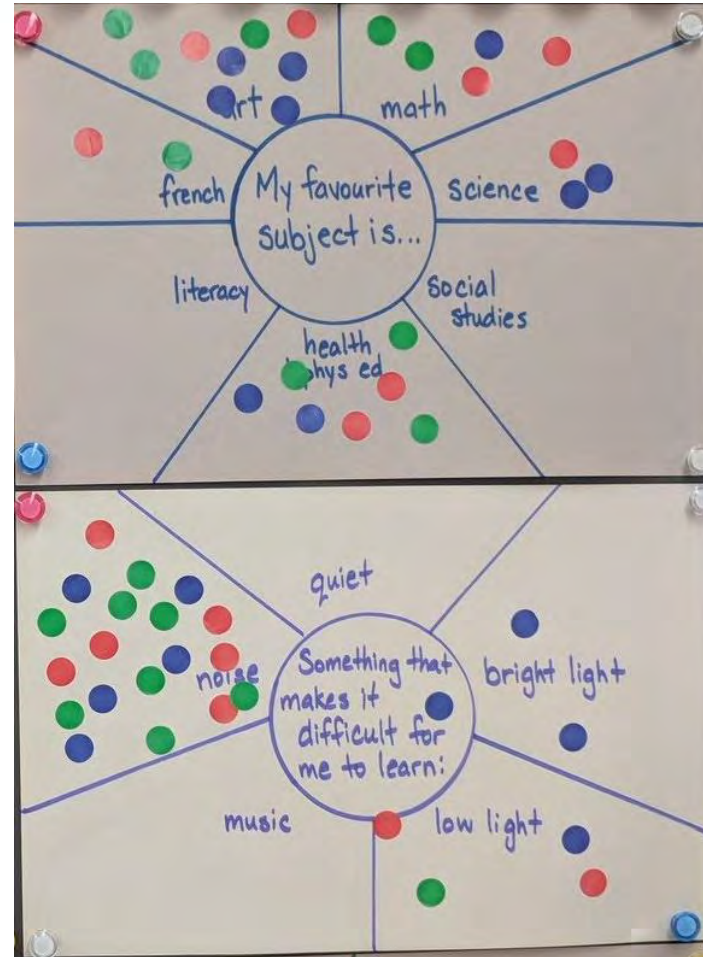
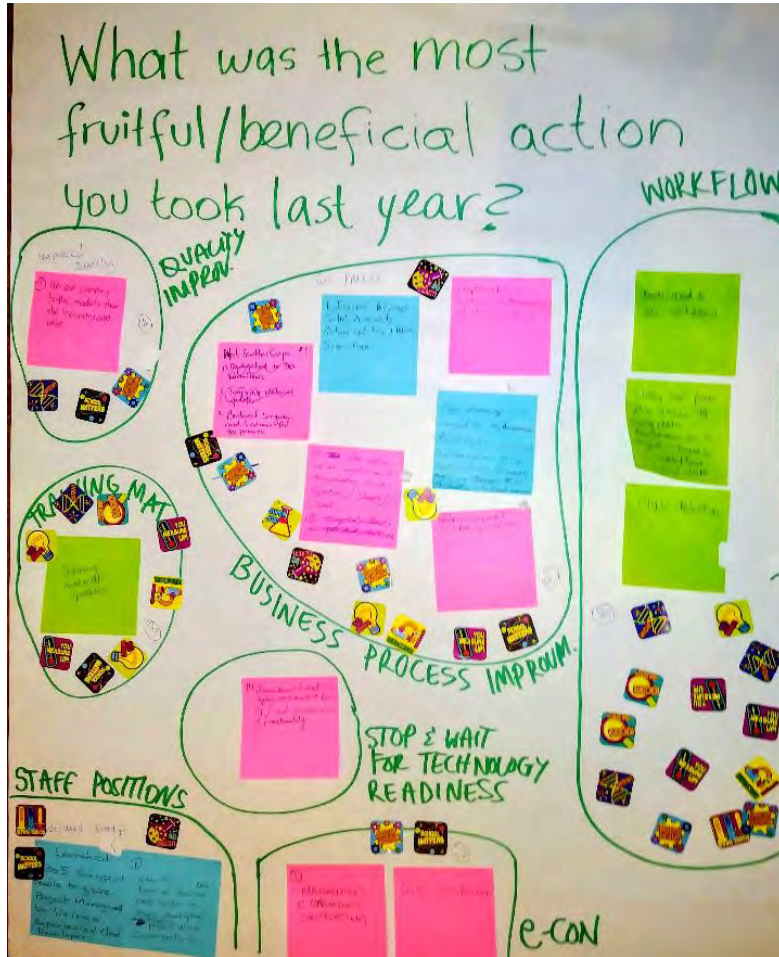
Land Use

Identify and implement walkable, bikeable, transit-oriented and innovation friendly transportation infrastructure. +0	Implement transportation infrastructure investments that encourage and enable people to live and work in the same community while minimizing regional low-occupancy vehicle travel. +0
Encourage CAT goals, strategies and action be incorporated into local agency land use planning process. +0	Provide guidance on how to use space freed up by CAT strategies. +0
Encourage the development of safe, comfortable, efficient mobility feeding high-capacity transit stations. +0	Encourage the development of safe, comfortable, efficient mobility in dense urban cores. +0
Encourage development of dense, vibrant, and transit-oriented communities in urban areas while preserving and enhancing rural and resource lands. +0	Implementation of CAT should not incentivize urban sprawl. Land use and growth management decisions implemented by state statute along with local government policies and ordinances will need to be updated. +0
Make room for shared mobility hubs fed by active transportation infrastructure. +0	Empower local jurisdictions to adopt sustainable land use policies and plans that support local trips on the local system and regional trips on the regional system. +0

Equity

Encourage and incentivize local land use that maintains the community's character and supports transportation system efficiency. +0	Develop and implement policies that ensure TNC Ride hailing companies report when, where and who they are providing services. +0
Encourage CAT solutions that serve diverse populations and enhance services to our state's most vulnerable populations. +0	Ensure shared mobility services meet the unique transportation needs of vulnerable populations such as seniors, families with children, and individuals with mobility or other physical impairments. +0
Integrate shared automated vehicle fleet application programming interfaces (API) into Mobility as a Service (MaaS) / Mobility on Demand (MOD) platforms and services to ensure all shared fleet services are accessible. +0	Ensure that automated vehicles are deployed in a way that does not encourage displacement. +0
Incentivize CAT strategies that promote equitable access to jobs and housing in every community across the state. +0	Include representatives from historically marginalized communities in developing CAT policy. +0
Define service level standards for SMaaS and MaaS. +0	Define service levels for vulnerable populations such as seniors, families with children, and individuals with mobility or other physical impairments. +0
Support mode neutral mobility improvements. +0	Prioritize investments that address inequitable exposure of historically disadvantaged communities to traffic violence. +0
Ensure payment for CAT options is available to the unbanked or those that don't own smart phones. +0	Use automated enforcement methods for traffic violations. +0
Pricing the mobility of goods to ensure that low-value or risky goods movement does not displace independent mobility for people. +0	Ensure the benefits of automated mobility are equitably distributed across all segments of the community and that the negative impacts of automated mobility are not disproportionately borne by traditionally marginalized communities. +0

Sorting & Assigning Strategies with Active Facilitation



Workshop Logistics



- Date: March 11, 2020
- Location: Olympia-WSDOT MATS Lab
- Half day or full day, TBD
- Participants: Goal 30 or less
 - » Activity 1 Work Team Members
 - » WSDOT Staff
 - » Other Interested Subcommittee Members
 - » Goal Related Subject Matter Experts
 - » Other AV WG Subcommittee leads/Rep
 - » Others?

Steps to Finalize the CAT Policy Document



- Target audience: 2021 legislative session

Deadline: September 24, 2020 ExCo meeting

- **March 11, 2020** Workshop
- Incorporate workshop results and revise policy draft: **March- April 2020**
- Full subcommittee review and initial endorsement in **April 2020**
- Brief-Update ExCo in **May 6th, 2020**
- Request final endorsement (vote) from Subcommittee in **June 2020**
- Present to ExCo in **June 24th, 2020**
- July – Sept 2020 finalize for adoption by ExCo in **September 24th, 2020**

Activity 1 Discussion

